

SEQUENCE LISTING

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<120> CANINE VACCINES AGAINST BORDETELLA BRONCHISEPTICA

<130> 16112 (PC25496A)

<140> 60/443,418
<141> 2003-01-29

<160> 3

<170> PatentIn version 3.2

<210> 1
<211> 602
<212> PRT
<213> Bordetella bronchiseptica

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Thr Thr Ile Lys Val Ser Gly Arg Gln Ala Gln Gly Val Leu Leu Glu
35 40 45

Asn Pro Ala Ala Glu Leu Arg Phe Gln Asn Gly Ser Val Thr Ser Ser
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Gly Gln Leu Phe Asp Glu Gly Val Arg Arg Phe Leu Gly Thr Val Thr
65 70 75 80

Val Lys Ala Gly Lys Leu Val Ala Asp His Ala Thr Leu Ala Asn Val
85 90 95

Ser Asp Thr Arg Asp Asp Gly Ile Ala Leu Tyr Val Ala Gly Glu
100 105 110

Gln Ala Gln Ala Ser Ile Ala Asp Ser Thr Leu Gln Gly Ala Gly Gly
115 120 125

Val Arg Val Glu Arg Gly Ala Asn Val Thr Val Gln Arg Ser Thr Ile

130

135

140

Val Asp Gly Gly Leu His Ile Gly Thr Leu Gln Pro Leu Gln Pro Glu
145 150 155 160

Asp Leu Pro Pro Ser Arg Val Val Leu Gly Asp Thr Ser Val Thr Ala
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Val Pro Ala Ser Gly Ala Pro Ala Ala Val Ser Val Phe Gly Ala Asn
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Glu Leu Thr Val Asp Gly Gly His Ile Thr Gly Gly Arg Ala Ala Gly
195 200 205

Val Ala Ala Met Asp Gly Ala Ile Val His Leu Gln Arg Ala Thr Ile
210 215 220

Arg Arg Gly Asp Ala Pro Ala Gly Gly Ala Val Pro Gly Gly Ala Val
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Pro Gly Gly Phe Gly Pro Leu Leu Asp Gly Trp Tyr Gly Val Asp Val
245 250 255

Ser Asp Ser Thr Val Asp Leu Ala Gln Ser Ile Val Glu Ala Pro Gln
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Leu Gly Ala Ala Ile Arg Ala Gly Arg Gly Ala Arg Val Thr Val Ser
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Gly Gly Ser Leu Ser Ala Pro His Gly Asn Val Ile Glu Thr Gly Gly
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Gly Ala Arg Arg Phe Pro Pro Pro Ala Ser Pro Leu Ser Ile Thr Leu
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Arg Ala Gly Ala Arg Ala Gln Gly Arg Ala Leu Leu Tyr Arg Val Leu
325 330 335

Pro Glu Pro Val Lys Leu Thr Leu Ala Gly Gly Ala Gln Gly Gln Gly
340 345 350

Asp Ile Val Ala Thr Glu Leu Pro Pro Ile Pro Gly Ala Ser Ser Gly
355 360 365

Pro Leu Asp Val Ala Leu Ala Ser Gln Ala Arg Trp Thr Gly Ala Thr
370 375 380

Arg Ala Val Asp Ser Leu Ser Ile Asp Asn Ala Thr Trp Val Met Thr
385 390 395 400

Asp Asn Ser Asn Val Gly Ala Leu Arg Leu Ala Ser Asp Gly Ser Val
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Asp Phe Gln Gln Pro Ala Glu Ala Gly Arg Phe Lys Val Leu Met Val
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Asp Thr Leu Ala Gly Ser Gly Leu Phe Arg Met Asn Val Phe Ala Asp
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Leu Gly Leu Ser Asp Lys Leu Val Val Met Arg Asp Ala Ser Gly Gln
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His Arg Leu Trp Val Arg Asn Ser Gly Ser Glu Pro Ala Ser Ala Asn
465 470 475 480

Thr Met Leu Leu Val Gln Thr Pro Arg Gly Ser Ala Ala Thr Phe Thr
485 490 495

Leu Ala Asn Lys Asp Gly Lys Val Asp Ile Gly Thr Tyr Arg Tyr Arg
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Leu Ala Ala Asn Gly Asn Gly Gln Trp Ser Leu Val Gly Ala Lys Ala
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Pro Pro Ala Pro Lys Pro Ala Pro Gln Pro Gly Pro Gln Pro Gly Pro
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Gln Pro Gly Pro Gln Pro Pro Gln Pro Pro Gln Pro Pro Gln Pro Pro
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Gln Arg Gln Pro Glu Ala Pro Ala Pro Gln Pro Pro Ala Gly Arg Glu
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cagaggcagc	cggaagcgcc	ggcgccgcaa	ccgcccgg	gcagggagtt	gtccgccc	1740
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<212> PRT
<213> *Bordetella bronchiseptica*

<400> 3

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Thr	Thr	Ile	Lys	Val	Ser	Gly	Arg	Gln	Ala	Gln	Gly	Val	Leu	Leu	Glu
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															45

Asn	Pro	Ala	Ala	Glu	Leu	Arg	Phe	Gln	Asn	Gly	Ser	Val	Thr	Ser	Ser
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															60

Gly	Gln	Leu	Phe	Asp	Glu	Gly	Val	Arg	Arg	Phe	Leu	Gly	Thr	Val	Thr
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															75
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Val	Lys	Ala	Gly	Lys	Leu	Val	Ala	Asp	His	Ala	Thr	Leu	Ala	Asn	Val
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Ser	Asp	Thr	Arg	Asp	Asp	Gly	Ile	Ala	Leu	Tyr	Val	Ala	Gly	Glu
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														105
														110

Gln	Ala	Gln	Ala	Ser	Ile	Ala	Asp	Ser	Thr	Leu	Gln	Gly	Ala	Gly	Gly
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Val	Arg	Val	Glu	Arg	Gly	Ala	Asn	Val	Thr	Val	Gln	Arg	Ser	Thr	Ile
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														135	
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Val	Asp	Gly	Gly	Leu	His	Ile	Gly	Thr	Leu	Gln	Pro	Leu	Gln	Pro	Glu
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														160	

Asp Leu Pro Pro Ser Arg Val Val Leu Gly Asp Thr Ser Val Thr Ala

165 170 175

Val Pro Ala Ser Gly Ala Pro Ala Ala Val Ser Val Phe Gly Ala Asn
180 185 190

Glu Leu Thr Val Asp Gly Gly His Ile Thr Gly Gly Arg Ala Ala Gly
195 200 205

Val Ala Ala Met Asp Gly Ala Ile Val His Leu Gln Arg Ala Thr Ile
210 215 220

Arg Arg Gly Asp Ala Pro Ala Gly Gly Ala Val Pro Gly Gly Ala Val
225 230 235 240

Pro Gly Gly Phe Gly Pro Leu Leu Asp Gly Trp Tyr Gly Val Asp Val
245 250 255

Ser Asp Ser Thr Val Asp Leu Ala Gln Ser Ile Val Glu Ala Pro Gln
260 265 270

Leu Gly Ala Ala Ile Arg Ala Gly Arg Gly Ala Arg Val Thr Val Ser
275 280 285

Gly Gly Ser Leu Ser Ala Pro His Gly Asn Val Ile Glu Thr Gly Gly
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Gly Ala Arg Arg Phe Pro Pro Pro Ala Ser Pro Leu Ser Ile Thr Leu
305 310 315 320

Gln Ala Gly Ala Arg Ala Gln Gly Arg Ala Leu Leu Tyr Arg Val Leu
325 330 335

Pro Glu Pro Val Lys Leu Thr Leu Ala Gly Gly Ala Gln Gly Gln Gly
340 345 350

Asp Ile Val Ala Thr Glu Leu Pro Pro Ile Pro Gly Ala Ser Ser Gly
355 360 365

Pro Leu Asp Val Ala Leu Ala Ser Gln Ala Arg Trp Thr Gly Ala Thr
370 375 380

Arg Ala Val Asp Ser Leu Ser Ile Asp Asn Ala Thr Trp Val Met Thr
385 390 395 400

Asp Asn Ser Asn Val Gly Ala Leu Arg Leu Ala Ser Asp Gly Ser Val
405 410 415

Asp Phe Gln Gln Pro Ala Glu Ala Gly Arg Phe Lys Cys Leu Met Val
420 425 430

Asp Thr Leu Ala Gly Ser Gly Leu Phe Arg Met Asn Val Ala Phe Ala
435 440 445

Asp Leu Gly Leu Ser Asp Lys Leu Val Val Met Arg Asp Ala Ser Gly
450 455 460

Gln His Arg Leu Leu Val Arg Asn Ser Gly Ser Glu Pro Ala Ser Gly
465 470 475 480

Asn Thr Met Leu Leu Val Gln Thr Pro Arg Gly Ser Ala Ala Thr Phe
485 490 495

Thr Leu Ala Asn Lys Asp Gly Lys Val Asp Ile Gly Thr Tyr Arg Tyr
500 505 510

Arg Leu Ala Ala Asn Gly Asn Gly Gln Trp Ser Leu Val Gly Ala Lys
515 520 525

Ala Pro Pro Ala Pro Lys Pro Ala Pro Gln Pro Gly Pro Gln Pro Gly
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Pro Gln Pro Pro Gln Pro Pro Gln Pro Pro Gln Pro Pro Gln Arg Gln
545 550 555 560

Pro Glu Ala Pro Ala Pro Gln Pro Pro Ala Gly Arg Glu Leu Ser Ala
565 570 575

Ala Ala Asn Ala Ala Val Asn Thr Gly Gly Val Gly Leu Ala Ser Thr
580 585 590

Leu Trp Tyr Ala Glu Ser Asn
595